



Memorandum

Date: May 13, 1999

To: CALFED Policy Group

From: Lester A. Snow 

Subject: Proposed Process for Agency Review of MOA Regarding CWA Sec. 404 Compliance

CALFED agencies have proposed a Memorandum of Agreement among the Corps, USEPA, and other appropriate CALFED agencies describing a strategy for programmatic compliance with Clean Water Act Section 404. Staff from the Corps, USEPA, the California Attorney General, and CALFED are currently drafting this MOA. A first partial draft of the MOA, with several "placeholder" sections yet to be completed, is attached for your review.

We propose the following actions with respect to the draft MOA:

1. Include a general description of the MOA in the Revised Phase II Report, similar to the description contained in the December 1998 Phase II Report. The draft MOA itself would not appear in the Phase II Report or the revised draft EIS/EIR.
2. Provide CALFED agencies with a comment period ending **May 24** to voice concerns over the *structure and general approach* of the draft MOA. Communicate any concerns on the MOA to Rick Soehren.
3. Upon CALFED agency concurrence with the structure and general approach, schedule a meeting with stakeholders to solicit initial reaction to the draft MOA.
4. Continue agency meetings to discuss and develop content of the MOA, culminating in completion of the MOA by January 2000.

Attachment

CALFED Agencies

California The Resources Agency
 Department of Fish and Game
 Department of Water Resources
 California Environmental Protection Agency
 State Water Resources Control Board

Federal Environmental Protection Agency
 Department of the Interior
 Fish and Wildlife Service
 Bureau of Reclamation
 U.S. Army Corps of Engineers

Department of Agriculture
Natural Resources Conservation Service
Department of Commerce
National Marine Fisheries Service

DRAFT
MEMORANDUM OF AGREEMENT ON IMPLEMENTING CLEAN WATER ACT
SECTION 404(b)(1) FOR ACTIVITIES PROPOSED UNDER
THE CALFED BAY DELTA PROGRAM

RECITALS

These recitals provide background and context for the Memorandum of Agreement that follows.

1. The Clean Water Act (Act) establishes a goal of restoring and maintaining the chemical, physical, and biological integrity of the Nation's waters. Under Section 404(a) of the Act, the United States Army Corps of Engineers (Corps) issues permits for the discharge of dredged or fill material into waters of the United States, in compliance with guidelines developed by the United States Environmental Protection Agency (EPA) under Section 404(b)(1) of the Act (Guidelines). These Guidelines impose a high standard of protection, requiring that no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences. In addition, the Guidelines prohibit any discharge of dredged or fill material that would cause or contribute to a violation of State water quality standards, jeopardize the continued existence of a threatened or endangered species, violate toxic effluent standards, violate marine sanctuary requirements, or cause or contribute to significant degradation of waters of the United States. Moreover, the Guidelines require that unavoidable impacts be offset through appropriate and practicable mitigation.

An important requirement of the Guidelines is that only the least environmentally damaging practicable alternative (LEDPA) that achieves the applicant's overall project purpose is permissible. To determine the LEDPA, it is necessary to weigh the alternatives in light of the presumptions set forth in the Guidelines. In particular, two critical presumptions must be addressed:

1. that practicable alternatives exist that do not involve discharges to special aquatic sites (wetlands, etc.); and
2. these practicable nonstructural alternatives are presumed to be less environmentally damaging than alternatives which involve Section 404 discharges.

Guidelines requirements pertaining to compliance with water quality standards, marine sanctuary requirements and the Endangered Species Act are primarily the responsibility of other agencies, and so are not addressed by this Agreement. In addition, Guidelines requirements pertaining to

significant degradation, compensatory mitigation and compliance with toxic effluent standards, are not, as a general matter, amenable to detailed analysis at a programmatic level.

2. In 1994, the Governor's Water Policy Council of the State of California and the Federal Ecosystem Directorate entered into a Framework Agreement to establish a comprehensive program for coordination and communication with respect to environmental protection and water supply dependability in the Bay-Delta Estuary. This Framework Agreement served as the basis for the CALFED Bay-Delta Program.

3. The mission of the CALFED Bay-Delta Program is to develop a long-term comprehensive plan that will restore ecological health and improve water management for beneficial uses of the Bay-Delta system. The CALFED Bay-Delta Program is also guided by solution principles adopted by CALFED agencies. According to the solution principles, a successful Bay-Delta solution must reduce conflicts in the system, be equitable, be affordable, be durable, be implementable, and have no significant redirected impacts.

4. To achieve its purposes, the CALFED Bay-Delta Program has developed eight broad program as elements of the CALFED programmatic preferred alternative. These Program Elements are:

1. Ecosystem Restoration Program
2. Levee System Protection Program
3. Storage Facilities
4. Conveyance Facilities
5. Water Use Efficiency Program
6. Water Quality Program
7. Water Transfers
8. Watershed Management

The CALFED Bay-Delta Program intends to initiate implementation of its preferred alternative after execution of a Record of Decision. The 30-year implementation period following the Record of Decision is referred to as Phase III of the Program. The CALFED Bay-Delta Program has defined the first seven years after execution of a Record of Decision as Stage 1 of Phase III of the CALFED Bay-Delta Program.

5. The CALFED Program elements will include projects and/or actions that involve discharges of dredged or fill material, as defined by Section 404(b)(1) of the Act. Some of these projects and/or actions will be initiated during Stage 1.

PURPOSE

A. This Memorandum of Agreement (Agreement) describes the process by which compliance with the Guidelines can be demonstrated for those actions or projects of the CALFED Bay-Delta program requiring Section 404 permits. The intent of this Agreement is to streamline the Section 404 permitting process while at the same time ensuring that the supporting documentation satisfies the requirements of the Guidelines.

B. This Agreement includes certain general conclusions about the CALFED Bay Delta Program. These conclusions will assist in making final determinations of compliance with the Guidelines for particular CALFED Projects or Actions.

C. This Agreement includes interim assessments for specific CALFED Program elements, and describes the conditions under which the Corps will rely on these specific interim assessments in its subsequent determination of compliance with the Guidelines for CALFED Projects or Actions.

D. The interim assessments in this Agreement do not include site-specific analyses, which will be conducted in Phase III. In that respect, these are partial assessments. Where appropriate, this Agreement specifies information and analysis needed in Phase III before the Corps can complete a determination of compliance for a particular CALFED Project or Action.

DEFINITIONS

"Agency Signatories" are [literally list them by formal name; it may include any CALFED agency]

"CALFED Actions" are activities carried out with the express approval of the CALFED Policy Team in order to implement the CALFED Bay Delta Program.

"CALFED Policy Group" is a coordination group composed of representatives from federal and California agencies, formed under the [cite the organic document, assuming we have one], or its successor.

"CALFED Projects" are projects carried out with the express approval of the CALFED Policy Team in order to implement the CALFED Bay Delta Program.

"Existing 404 Process" means the Clean Water Act Section 404 permitting process applicable to a CALFED Action or CALFED Project in the absence of this Memorandum of Agreement.

"Guidelines" are the guidelines promulgated by EPA under Clean Water Act Section 404(b)(1) and published at 40 CFR Section 230.

"Non-Agency Signatories" are any individuals or entities that have the express authorization of the CALFED Policy Group to implement a CALFED Project or CALFED Action and that have executed this Agreement.

"Signatories" include Agency Signatories and Non-Agency Signatories.

"Stage 1 Actions or Projects" are those CALFED Actions and CALFED Projects that have been designated by the CALFED Policy Group to begin implementation during Stage 1, the seven-year period immediately following execution of the Record of Decision on the CALFED Bay Delta Program.

AGREEMENTS

I. AGREEMENTS ON CALFED BAY DELTA PROGRAM

A. The Signatories acknowledge the integrated nature of the CALFED Bay Delta Program. This Agreement articulates the extent and manner in which this acknowledgment affects the analysis of compliance with Section 404 of the Act.

B. The Signatories agree that this Agreement makes no conclusions about the need for, nature of, or extent of mitigation requirements for unavoidable site-specific adverse impacts to resources identified in site-specific evaluations. The Signatories agree further that mitigation of unavoidable adverse indirect or cumulative impacts to resources identified at either the site-specific or programmatic level will generally be addressed through the adequate implementation of the CALFED Ecosystem Restoration Program; however, the Signatories recognize that the Corps must verify the adequacy of the CALFED Ecosystem Restoration Program in mitigating for adverse indirect and cumulative impacts of specific projects as part of the permitting process for a specific project.

C. The Signatories agree on the program purpose statement for the CALFED program, incorporated by reference into this Agreement as Appendix A.

D. The Guidelines require the Corps to conduct an evaluation of the probable impacts of a proposed project and its intended use on the public interest. Factors considered in the public interest review include water conservation, economics, aesthetics, environmental quality, historic values, fish and wildlife values, flood control, land use, navigation, recreation, water supply and water quality, energy needs, safety, food production, and the general public and private need and welfare. Signatories to this Agreement agree that the CALFED Bay Delta Program is an integrated package of actions that, viewed in its entirety, is in the public interest. However, the Signatories agree further that this Agreement does not confer any project-level determination of public interest, recognizing that the Corps must make public interest determinations at the project level when projects are fully described and application for permits is made.

E. When making permit decisions for storage facilities, the Corps intends to employ the assessment of the adequacy of the non-structural alternatives in meeting water supply needs provided for by this document as an element of its determination whether supplemental storage facilities proposed for water supply reliability purposes comply with the Guidelines.

II. AGREEMENTS ON EVALUATING CALFED STORAGE PROJECTS

[Ed. Note: This discussion focuses on storage for water supply. The approach for storage for water quality or for environmental water, or for multipurpose projects has not been determined or discussed.]

The CALFED programmatic preferred alternative includes an evaluation of additional storage facilities in the Integrated Storage Initiative. Practicable, nonstructural water management tools exist which can contribute to achieving CALFED water supply reliability goals. These water management tools do not generally involve discharges of dredged or fill material into waters of the United States ; thus, they are presumed under the Guidelines to be less environmentally damaging than alternatives that involve discharges. This Agreement describes performance criteria or levels of effort for all nonstructural water management tools that must be implemented as part of the least environmentally damaging practicable combination of water management tools. Implementation of such less environmentally damaging water management tools to the extent practicable (as defined by the performance measures) provides one of the critical bases for determining whether surface storage is needed to address water supply reliability needs. This Agreement further provides that the existence of project beneficiaries willing to pay the full costs for the least environmentally damaging surface storage project despite the availability and aggressive implementation of the nonstructural alternatives would be highly relevant evidence that the water supply reliability needs of the project purpose have not been adequately addressed through nonstructural alternatives. Accordingly:

A. The Signatories agree that the following water management tools will be implemented to the maximum extent practicable to reduce or eliminate the need for new or expanded surface storage in a CALFED programmatic preferred alternative:

- a. Programs to provide incentives for or require urban water conservation
- b. Programs to provide incentives for or require agricultural water conservation
- c. Programs to provide incentives for or require water conservation on managed wetlands
- d. A facilitated and properly regulated water transfers market
- e. Programs to provide incentives for or require recycling of urban wastewater

- f. Groundwater banking and conjunctive use with developed surface supplies
- g. Programs to provide incentives for or require the temporary fallowing of agricultural land to shift water demand and make water available for transfer to other beneficial uses
- h. Programs to encourage or require the permanent retirement of agricultural land to improve water quality with potential ancillary water supply benefits
- i. Financing provisions assuring that beneficiaries pay the full mitigated marginal cost [Ed. Note: Needs a definition] of any water derived from new or expanded surface storage projects.

For purposes of this Agreement, the Signatories agree further that implementation of these water management tools will be found to be "to the maximum extent practicable" if and only if the performance measures for each of these listed water management tools contained in Appendix B, are assured of being substantially attained according to the manner and schedule included in Appendix B.

B. The Signatories agree that the existence of project beneficiaries willing to pay the full mitigated marginal costs to develop new water supplies through new and/or expanded storage facilities would be relevant to a demonstration that nonstructural alternatives are not sufficient to achieve the water supply reliability component of CALFED's project purpose.

C. The Signatories agree that the list of potential surface storage projects listed in Appendix C was developed in a process that is consistent with screening criteria appropriate under Section 404. In particular, the Signatories agree that development of this list did not impermissibly screen out potential surface storage projects that may constitute the least environmentally damaging practicable alternative. The Signatories further acknowledge that no final determinations have been made as to the practicability of these projects in achieving CALFED's project purposes, nor as to which of these projects is least environmentally damaging.

D. The Signatories acknowledge that site-specific environmental studies, such as field surveys for all special status species in and around potential surface storage sites, have not been completed. Therefore, this Agreement is not a guarantee that any specific surface storage project can proceed, despite good-faith compliance with the terms of this Agreement.

E. The Signatories acknowledge that the CALFED Bay Delta Program's full evaluation of potential surface storage sites at the programmatic level included only those sites listed in Appendix C and, cumulatively, for surface and groundwater storage volumes ranging from zero to 6 million acre feet. The Signatories agree that this Agreement does not apply to, nor create any implications for, evaluations or permitting of surface storage facilities that are not in Appendix C or that, cumulatively, exceed this stated range of capacity. In addition, the

Signatories acknowledge that water management in California is increasingly coordinated among federal, state, and local agencies and private parties. Signatories further acknowledge that completion of the CALFED Integrated Storage Investigation and implementation of a facilitated and properly regulated water transfers market will contribute to a further increase in coordination among various public and private water management entities. Therefore, the Signatories agree that any new or expanded surface storage facilities, with a project purpose that will contribute to CALFED water supply reliability objectives outside the area of origin of the new or expanded facility will be included in computing exceedances of the cumulative ranges of storage capacity, regardless of whether the project is a CALFED Project or CALFED Action, is carried out by a Signatory or an unrelated third party, or is listed in Appendix C.

III. AGREEMENTS ON EVALUATING CALFED CONVEYANCE PROJECTS

[TO BE ADDED]

IV. AGREEMENTS ON EVALUATING CALFED ECOSYSTEM RESTORATION PROGRAM PROJECTS

[TO BE ADDED]

V. AGREEMENTS ON EVALUATING CALFED WATER QUALITY PROGRAM PROJECTS

[TO BE ADDED]

VI. AGREEMENTS ON EVALUATING CALFED LEVEE PROJECTS

[TO BE ADDED]

VII. AGREEMENTS ON EVALUATING CALFED STAGE 1 ACTIONS

A. The Signatories acknowledge that the CALFED Bay-Delta Program has identified a set of Stage 1 Action Bundles. These bundles are described in Appendix D, attached and incorporated into this Agreement.

B. The Signatories acknowledge that certain actions in the Stage 1 Action Bundles may involve discharges of dredged or fill material to waters of the United States, and so may require authorization under Section 404 of the Act. The Signatories further recognize that there is no conceptual benefit to a programmatic assessment of compliance with the Guidelines with respect to the Stage 1 actions, and agree that compliance with the Guidelines for these actions (if

applicable) will be determined on a project-specific basis, consistent with the permit streamlining procedures set forth below.

VIII. AGREEMENTS ON PERMIT STREAMLINING

Implementation of the CALFED Bay Delta Program will require permitting of numerous actions. The Signatories agree that establishing a framework of cooperation to facilitate CALFED permitting will reduce workload for permitting agencies and result in more timely approval of projects.

[Remainder of section will describe any additional streamlining arrangements, establish an expedited Corps dispute resolution process, extend the one-year time limit on commencing projects, commit signatories to expeditious review of permit applications, describe use of nationwide permits, general permits, concurrent permitting of functionally bundled actions.]

ADDITIONAL PROVISIONS

A. Applicability of this Agreement

Any Signatory can elect to proceed with compliance with Clean Water Act Section 404 as to any CALFED Project or CALFED Action in which that Signatory is participating under the terms of this Agreement. This election shall be communicated in writing to the Corps, EPA, and the CALFED Policy Group as soon as possible after the specific approval of such CALFED Project or CALFED Action by the CALFED Policy Group. If more than one Signatory is involved in a particular CALFED Project or CALFED Action, all such Signatories must make this election in order for the election to be complete.

If a Signatory declines to comply with Section 404 as described in this Agreement, that CALFED Project or CALFED Action shall proceed under the Existing 404 Process without regard to this Agreement. In that case, nothing in this Agreement shall create any inferences, presumptions, or conclusions for purposes of the Existing 404 Process, and the Signatory may not rely on any commitments made by any Signatory in this Agreement in Existing 404 Process.

B. Reservation of Authorities

This Agreement does not modify existing agency authorities by reducing, expanding, or transferring any of the statutory or regulatory authorities and responsibilities of any of the signatory agencies.

C. Revisions to Agreement

[Ed. Note: A carefully articulated revision process is necessary. It should account for a changeable set of signatories, accommodate different classes of signatories including central ones such as Corps and EPA, others that may be non-agency signatories.]

D. Reservation of Agency Position

No Signatory to this Agreement waives any administrative claims, positions, or interpretations it may have with respect to the applicability or enforceability of the Act except as described herein.

E. Obligation of Funds, Commitment of Resources

Nothing in this Agreement shall be construed as obligating any of the parties to the expenditure of funds in excess of appropriations authorized by law or otherwise commit any of the agencies to actions for which it lacks statutory authority.

F. Nature of Agreement

Except as explicitly provided for above, this Agreement is not intended to, and does not, create any other right or benefit, substantive or procedural, enforceable at law or equity by a party against the United States, the State of California, any agencies thereof, any officers or employees thereof, or any other person.

G. Effective Date

This Agreement will become effective upon signature by each of the parties hereto and issuance of a programmatic Record of Decision for the CALFED Bay-Delta Program.

H. Termination/Withdrawal Provisions

[TO BE ADDED]

I. Effect of Subsequent Execution of this Agreement by Either Agency or Non Agency Parties; Effect of Amendments on Continued Participation; Applicable Agreement

[Ed. Note: Need to have process enabling subsequent parties to join MOA; Need to come to agreement on how this will bind successors and/or new entities]

ATTACHMENTS

- Appendix A. CALFED Bay-Delta Program Purpose Statement
- Appendix B. Water Management Tools and Associated Performance Measures
- Appendix C. List of Applicable Potential Surface Storage Locations
- Appendix D. Stage 1A Action Bundles

Memorandum

Date: May 12, 1999

To: CALFED Policy Group

From: Lester A. Snow *LAS*

Subject: Overview of Major Changes in *Revised Phase II Report*, June 1999

The *Revised Phase II Report* to be published in June 1999 will be a refinement of the December 1998 version of the report. Much of the information will remain the same, while other parts of the new Phase II Report will describe significant advances in the CALFED Program that have occurred since last December. Areas of major change include:

- Integration of Four Resource Area Strategies
- Water Management Strategy
- Integrated Storage Investigation
- Environmental Water Account
- Multi-species Conservation Strategy
- Governance
- Finance
- Water Transfers
- Water Use Efficiency
- Program Implementation

Here is a summary of the major changes in the June 1999 draft:

Integration of Four Resource Area Strategies

The *Revised Phase II Report* places additional emphasis on a fundamental aspect of the CALFED approach. The Program has developed resource management strategies for four resource areas: ecosystem quality, water quality, levee system integrity, and water supply reliability. These four resource management strategies are integrated through the eight program elements: each resource management strategy relies on actions from several different program elements. Conversely, the eight program elements help satisfy objectives in four different resource areas. Thus, an optimal program to meet the CALFED mission must be a comprehensive, integrated package of actions.

CALFED Agencies

California
The Resources Agency
Department of Fish and Game
Department of Water Resources
California Environmental Protection Agency
State Water Resources Control Board

Federal
Environmental Protection Agency
Department of the Interior
Fish and Wildlife Service
Bureau of Reclamation
U.S. Army Corps of Engineers

Department of Agriculture
Natural Resources Conservation Service
Department of Commerce
National Marine Fisheries Service

Water Management Strategy

The Water Management Strategy (WMS) framework presented in the June 1999 draft of the *Phase II Report* expands on the concepts presented earlier. The framework is still a work-in-progress with a draft strategy planned for September 1999. The June 1999 *Phase II Report* includes additional refinement and consolidation of the water supply reliability goals and objectives and an expanded menu of water management tools with the addition of the Environmental Water Account, Integrated Storage Investigation, and conveyance to the list. The framework also begins describing the general approach for the economic evaluations and the opportunities, limitations, and interrelation of the water management tools which are the basis of the strategy.

Integrated Storage Investigation

An important part of refining the Water Management Strategy is refining the tools. This is particularly true where actions, such as storage, require a significant initial investment and are less conducive to incremental implementation and adaptive management. The Integrated Storage Investigation (ISI) will evaluate the relationship between various types of storage and the overall role of storage as part of the Water Management Strategy. The ISI will coordinate existing storage investigations by individual CALFED agencies, CALFED-initiated storage evaluations and broader water management strategies and analysis to provide a comprehensive assessment of alternative storage options and their utility to overall water management. Specifically, the ISI will evaluate surface storage, groundwater storage, power facility reoperation and the potential for conjunctive operation of these different types of storage. Additionally, these investigations will provide a comprehensive assessment and prioritization of critical fish migration barriers for modification or removal.

Environmental Water Account

An Environmental Water Account (EWA) is a concept that provides for various water assets to be used to benefit the environment. A portion of the existing and future water supply developed in the Bay-Delta system by the State and federal water projects could be allocated or purchased for use in protecting and enhancing fish and their habitat. Since December 1998 several gaming simulations have been conducted to better understand how an EWA might be operated under different scenarios. These simulations demonstrated that it is possible to make major shifts in Project operations to protect fish and to improve habitat conditions without reducing water supplies to the water users, but only if the EWA has access to storage, and is invested with funding of \$30 to 40 million per year. Storage south of the Delta or near the export pumps provided a premium in allowing flexibility in EWA operations. Use of groundwater was limited for the EWA given the low recharge and extraction rates. Sharing water supply generated by new facilities and the risks associated with water supply, along with a flexible management approach like EWA, provided for mutual incentives for long-term benefits for the environment, water quality, and water supply in the future.

Multi-species Conservation Strategy

Implementing CALFED actions -- even some ecosystem restoration actions -- will have a complex range of effects, including impacts to plants and animals listed under the Federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA) and other sensitive species. This Multi-species Conservation Strategy (MSCS) builds on the Ecosystem Restoration Program to provide a framework for compliance with the ESA, CESA, and a second California law also dealing with listed species, the Natural Community Conservation Planning Act (NCCPA). The goals of the programmatic MSCS are two-fold: first, to assess the CALFED Program as a whole and ensure the program will benefit endangered species; and second, to recommend the types of measures that will likely be required for the "take" authorizations necessary to implement Program actions.

Governance

CALFED is working with agencies and the Governance Workgroup to develop a long-term governance structure for the Bay-Delta Program. The final proposal for long term governance is not expected to be adopted until the ROD, and implementation will likely take up to 2-3 years if legislation is required. In order to begin implementation of the Program at the time of the ROD, CALFED has recognized the need to establish an interim process and governance structure to last until the long term structure is in place. CALFED is proposing an interim structure which relies on existing laws and authorities. Features of the interim structure would include: a stakeholder advisory group; a policy group composed of representatives of state and federal agencies to provide oversight and coordination; and performance of coordination and management functions. A more detailed Governance Plan is included in the *Implementation Plan* appendix to the *Revised Draft EIS/EIR*.

Finance

CALFED is preparing a Financing Plan that lays the foundation for making financing recommendations. Final financing recommendations are not expected until the ROD. In the draft financing plan, benefits and beneficiaries are described for each program to the extent feasible, existing funding programs are listed, potential funding sources are described and evaluated, and a possible Bay-Delta system diversion fee is described. Finally, options for financing each program are described briefly and finance issues are listed. A more detailed Finance Plan is included in the *Implementation Plan* appendix to the *Revised Draft EIS/EIR*.

Water Transfers

In the December 1998 *Phase II Report*, CALFED provided recommendations to resolve several water transfer issues. Some of these described actions or policies require CALFED agency adoption. These will be implemented during Stage 1. However, for other issues, CALFED recommended processes that are intended to resolve continuing disputes. These processes were

described previously in general terms. Additional refinement of these processes and, in some cases, proposals for implementation, are summarized in the new Water Transfers Program description along with actions and policies previously recommended.

Water Use Efficiency

The overall direction and intent of the Water Use Efficiency (WUE) Program remains consistent with the December 1998 *Phase II Report* and the February 1999 *WUE Program Plan*. The four WUE program elements (Agricultural, Urban, Water Recycling, and Managed Refuges) have been refined over the last four months and will continue to be refined through mid-2000. Each of these elements will have a Technical Assistance component which will begin implementation in early-2000. Partial implementation of the agricultural incentive program will begin in mid-2000. Remaining incentive programs will begin implementation in late-2000. Incentive programs will be designed to award CALFED grant funding for projects that demonstrate potential to provide CALFED water supply reliability, water quality, or ecosystem restoration benefits.

Program Implementation

Since release of the December 1998 *Phase II Report* substantial additional detail has been developed for Stage 1 actions. The effort has focused on developing specific, high priority actions to be considered for funding in FY 2000 and 2001. These are referred to as Stage 1a actions. The actions have been grouped into 7 bundles in an effort to provide balance within geographic and subject area boundaries. Next steps include formulation and documentation of a variety of linkage mechanisms which would serve to assure that implementation proceeds in a balanced manner. Additional detail, including a short description of each Stage 1a action, preliminary cost estimates, and potential implementation entities are contained in the *Implementation Plan* appendix to the *Revised Draft EIS/EIR*.

THE CALFED PROGRAM DECISION

May 13, 1999

The CALFED Agencies are developing a long-term comprehensive plan to restore ecological health and improve water management for beneficial uses of the Bay-Delta System. To achieve this goal, the CALFED Program seeks to restore ecological health, improve water quality, improve water supply reliability and ensure levee and channel integrity. Although the CALFED agencies are reaching a program decision, the details of how that program will be implemented, funded and governed are essential to agency and stakeholder confidence that the broad direction of the program is acceptable. The tasks facing the agencies, therefore, are to decide long-term policy direction, develop a plan to "fix the delta," begin to implement that plan, and finally, to identify funding, governance and linking actions to assure the long-term program will be implemented and operated as agreed.

The CALFED agencies are currently completing a draft programmatic environmental impact statement and report (EIS/EIR) pursuant to the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). That document examines ~~differing ways alternatives for~~ meeting the program goals. The CALFED agencies have identified a preferred program alternative as part of this environmental review. The draft programmatic EIS/EIR analyzes the environmental implications of each of the alternatives and compares them to the existing conditions and to the expected future conditions without any CALFED action.

The Preferred Program Alternative (see Section A below) describes the policy direction and long-term plan the CALFED agencies propose to follow in this effort. A programmatic evaluation is useful in the present case because it allows the agencies to examine cumulative impacts of individual, but geographically related, issues. It is also necessary to conduct the environmental review at a programmatic level because of the number of actions, length of time of implementation, and the complexity of the problems and solutions being considered.

A programmatic analysis, however, does not provide information of sufficient detail to allow the agencies to determine precisely how each program element will be carried out over the life of the program, or to assess all of the site-specific environmental consequences of these actions. Agencies and stakeholders seek greater certainty regarding the types of actions to be implemented and a tentative schedule for doing so. Detail at a greater level of specificity than is available at a programmatic level of analysis is important to comprehending how a large, complex program may be implemented.

For this reason, the CALFED agencies have described their proposed actions for the first years following a Record of Decision. As appropriate, these near-term actions as well as any subsequent actions will be subject to subsequent alternative analysis, environmental review and permitting decisions before these actions are implemented. Section B describes the near term actions that will be analyzed for site-specific compliance with CEQA, NEPA and permitting

requirements prior to a final decision on these actions.

Virtually all the near-term actions share two characteristics. First, they are designed to achieve multiple benefits. Second, they will be implemented in ways that increase our knowledge of the system so that we can adapt subsequent actions to increase effectiveness.

The near-term actions are parts of an integrated program that will yield multiple benefits. Nearly every action proposed will provide benefits in two or more resource areas at the same time, thus increasing program benefits and minimizing costs. In addition, there is synergy among actions that are geographically or functionally related. Thus, implementation is described not in terms of actions such as levee improvements or ecosystem restoration projects, but according to the achievement of multiple program objectives in a region through implementation of actions that are functionally integrated. There are virtually no single-benefit actions.

While many actions are described in terms of regional implementation, the multiple benefits derived from water management actions are most clearly demonstrated if these actions are described in terms of coordinated water management throughout the Bay-Delta system. This coordinated implementation is referred to as the CALFED Water Management Strategy. The Water Management Strategy is a flexible approach that will continually examine the potential of all available water management tools to contribute to the achievement of program objectives. The tools include water use efficiency, water transfers, water recycling, watershed management, water quality improvements, conveyance facilities, and groundwater and surface storage opportunities. These tools can all be used in varying combinations, depending on hydrologic and environmental conditions, to meet all four program objectives.

Two critical parts of the continuing refinement of the water management strategy include the Environmental Water Account and the Integrated Storage Investigation. The Environmental Water Account (EWA) concept is based upon the notion that flexible management of water operations could provide the flow component of fish recovery more efficiently than a completely prescriptive regulatory approach. The EWA would generate water resources throughout the Delta's watershed through a variety of actions, ~~from water purchases to sharing new facilities to relaxation of certain standards when there is no adverse impact to fish.~~ The EWA manager would apply these resources to provide fish protective actions, from instream flows to reduced export pumping. The EWA's intent is to provide flexibility to achieve fish recovery, which would provide certainty (ESA and other regulatory assurances) to water users.

The Integrated Storage Investigation will evaluate surface storage, groundwater storage, power facility re-operation and the potential for conjunctive operation of these different types of storage to achieve multiple program objectives. Additionally, the nature of these investigations will provide an important opportunity to prepare a comprehensive assessment and prioritization of critical fish migration barriers for modification or removal. The

Integrated Storage Investigation will enable us to use existing facilities in ways that maximize program benefits, assess the desirability of modifying other facilities where their costs exceed benefits, and consider the costs and multiple benefits of additional groundwater or surface storage in the context of an integrated water management strategy.

The second characteristic shared by program actions is a structure that facilitates adaptive management. Actions are designed according to our current understanding of the system, and will be monitored so that we can confirm our understanding or modify subsequent actions to be more effective. This adaptive management approach will increase the ability to meet multiple objectives by maintaining the flexibility necessary to respond to new information, changing conditions, and improved understanding.

Finally, the means by which the CALFED Program alternative is funded and assured provides additional assurance that the program will be successfully implemented. Section C describes a strategy for providing financing, governance and addressing additional concerns about successfully implementing the program.

The CALFED Program Decision, therefore, includes the preferred program alternative, near-term actions and implementation strategy as follows:

A. PREFERRED PROGRAM ALTERNATIVE

The Preferred Program Alternative consists of a set of broadly described programmatic actions which set the long-term, overall direction of the CALFED Program. The description is programmatic in nature, intended to help agencies and the public make decisions on broad methods to meet Program purposes. The preferred program alternative is made up of the Levee System Integrity Program, Water Quality Program, Ecosystem Restoration Program, Water Use Efficiency Program, Water Transfers Program, Watershed Program, Storage and Delta Conveyance.

Even in this broad programmatic description, actions are intended to take place in an integrated framework and not independently of the other programs. While each program element is described individually, it is understood that only through coordinated, linked, incremental implementation can we effectively resolve problems in the Bay-Delta system.

Levee System Integrity Program

The focus of the Levee System Integrity Program is to improve levee stability to benefit all users of Delta water and land. Actions described in this program element protect water supply reliability by maintaining levee and channel integrity. Levee actions will be designed to provide simultaneous improvement in habitat quality, which will indirectly improve water supply reliability. Levee actions also protect water quality, particularly during low flow conditions when a catastrophic levee breach would draw salty water into the Delta.

There are five main parts to the levee program plus Suisun Marsh levee rehabilitation work:

- Delta Levee Base Level Protection Plan - Improve and maintain Delta levee system stability to meet the Corps' PL 84-99 levee standard.
- Delta Levee Special Improvement Projects - Enhance flood protection for key islands that provide statewide benefits to the ecosystem, water supply, water quality, economics, infrastructure, etc.
- Delta Levee Subsidence Control Plan - Implement current best management practices (BMPs) to correct subsidence adjacent to levees and coordinate research to quantify the effects and extent of inner-island subsidence.
- Delta Levee Emergency Management and Response Plan - The emergency management and response plan will build on existing state, federal, and local agency emergency management programs.
- Delta Levee Risk Assessment- Perform a risk assessment to quantify the major risks to Delta resources from floods, seepage, subsidence and earthquakes, evaluate the consequences, and develop recommendations to manage the risk.
- Suisun Marsh Levees- Rehabilitate Suisun Marsh levees.

Water Quality Program

The CALFED Program is committed to achieving continuous improvement in the quality of the waters of the Bay-Delta System with the goal of minimizing ecological, drinking water and other water quality problems, and to maintaining this quality once achieved. Improvements in water quality will result in improved ecosystem health, with indirect improvements in water supply reliability. Improvements in water quality also increase the utility of water, making it suitable for more uses.

The Water Quality Program includes the following actions:

- Drinking water parameters - Reduce the loads and/or impacts of bromide, total organic carbon, pathogens, nutrients, salinity, and turbidity through a combination of measures that include source reduction, alternative sources of water, treatment, storage and if necessary, conveyance improvements such as a screened diversion structure (up to 4000 cfs) on the Sacramento River near Hood. The Conveyance section of this document includes a discussion of this potential improvement.
- Pesticides - Reduce the impacts of pesticides through (1) development and implementation of BMPs, for both urban and agricultural uses; and (2) support of pesticide studies for regulatory agencies, while providing education and assistance in implementation of control strategies for the regulated pesticide users.
- Organochlorine pesticides - Reduce the load of organochlorine pesticides in the system by reducing runoff and erosion from agricultural lands through BMPs.
- Trace metals - Reduce the impacts of trace metals, such as copper, cadmium, and zinc, in upper watershed areas near abandoned mine sites. Reduce the impacts of copper through urban storm water programs and agricultural BMPs.

- Mercury - Reduce mercury levels in rivers and the estuary by source control at inactive and abandoned mine sites.
- Selenium - Reduce selenium impacts through reduction of loads at their sources and through appropriate land fallowing and land retirement programs.
- Salinity - Reduce salt sources in urban and industrial wastewater to protect drinking and agricultural water supplies, and facilitate development of successful water recycling, source water blending, and groundwater storage programs. Salinity in the Delta will be controlled both by limiting salt loadings from its tributaries, and through managing seawater intrusion by such means as using storage capability to maintain Delta outflow and to adjust timing of outflow, and by export management.
- Turbidity and sedimentation - Reduce turbidity and sedimentation, which adversely affect several areas in the Bay Delta and its tributaries.
- Low dissolved oxygen - Reduce the impairment of rivers and the estuary from substances that exert excessive demand on dissolved oxygen.
- Toxicity of unknown origin - Through research and monitoring, identify parameters of concern in the water and sediment and implement actions to reduce their impacts to aquatic resources.

Ecosystem Restoration Program

The goal of the Ecosystem Restoration Program is to improve and increase aquatic and terrestrial habitats, improve ecological functions in the Bay-Delta in order to support sustainable populations of diverse and valuable plant and animal species. Improvements in ecosystem health will reduce the conflict between environmental water use and other beneficial uses, and allow more flexibility in water management decisions.

Representative Ecosystem Restoration Program actions include:

- Restoring, protecting, and managing diverse habitat types representative of the Bay-Delta and its watershed.
- Acquiring water from sources throughout the Bay-Delta's watershed to provide flows and habitat conditions for fishery protection and recovery.
- Restoring critical in-stream and channel-forming flows in Bay-Delta tributaries.
- Improving Delta outflow during key periods ~~in spring~~.
- Reconnecting Bay-Delta tributaries with their floodplains through the construction of setback levees, the acquisition of flood easements, and the construction and management of flood bypasses for both habitat restoration and flood protection.
- Developing assessment, prevention and control programs for invasive species.
- Restoring aspects of the sediment regime by relocating in-stream and floodplain gravel mining, and by artificially introducing gravels to compensate for sediment trapped by dams.
- Modifying or eliminating fish passage barriers, including the removal of dams, construction of fish ladders, and construction of fish screens that use the best

available technology.

- Targeting research to provide information that is needed to define problems sufficiently, and to design and prioritize restoration actions.

Water Use Efficiency Program

The Water Use Efficiency Program includes actions to assure efficient use of existing and any new water supplies developed by the Program. Efficiency actions can alter the pattern of water diversions and reduce the magnitude of diversions, providing ecosystem benefits. Efficiency actions can also result in reduced discharge of effluent or drainage, improving water quality.

Water conservation-related actions include:

- Implement agricultural and urban conservation incentives programs to provide grant funding for water management projects that will provide multiple benefits which are cost-effective at the state-wide level, including improved water quality and reduced ecosystem impacts.
- Identify, in region-specific strategic plans for agricultural areas, measurable objectives to assure improvements in water management.
- Expand state and federal programs to provide increased levels of planning and technical assistance to local water suppliers.
- Work with the Agricultural Water Management Council (AWMC) to identify appropriate agricultural water conservation measures, set appropriate levels of effort, and certify or endorse water suppliers that are implementing locally cost-effective feasible measures.
- Work with the California Urban Water Conservation Council (CUWCC) to establish an urban water conservation certification process and set appropriate levels of effort in order to ensure that water suppliers are implementing cost-effective feasible measures.
- Help urban water suppliers comply with the Urban Water Management Planning Act.
- Identify and implement practices to improve water management for wildlife areas
- Gather better information on water use, identify opportunities to improve water use efficiency, and measure the effectiveness of conservation practices.
- Conduct directed studies and research to improve understanding of conservation actions.

Water recycling actions include:

- Help local and regional agencies comply with the water recycling provisions in the Urban Water Management Planning Act.
- Expand state and federal recycling programs to provide increased levels of planning, technical, and financing assistance (both loans and grants) and to develop new ways of providing assistance in the most effective manner.

- Provide regional planning assistance that can increase opportunities for the use of recycled water.

Water Transfer Program

The Water Transfer Program proposes a framework of actions, policies, and processes that, collectively, will facilitate water transfers and the further development of a state-wide water transfer market. The framework also includes mechanisms to provide protection from third party impacts. A transfers market can improve water availability for all users, including the environment. Transfers can also help to match water demand with water sources of the appropriate quality, thus increasing the utility of water supplies.

The Water Transfer Program will include the following actions and recommendations:

- Establish a California Water Transfer Information Clearinghouse to provide a public informational role. The clearinghouse would 1) ensure that information regarding proposed transfers is publically disclosed and, 2) perform on-going research and data collection functions to improve the understanding of water transfers and their potential beneficial and adverse effects.
- Require water transfer proposals submitted to the Department of Water Resources, the U.S. Bureau of Reclamation, or the State Water Resources Control Board to include analysis of potential groundwater, socio-economic, or cumulative impacts as warranted by individual transfers.
- Streamline the water transfer approval process currently used by the Department of Water Resources, the U.S. Bureau of Reclamation, or the State Water Resources Control Board. This would include clarifying and disclosing current approval procedures and underlying policies as well as improving the communication between transfer proponents, reviewing agencies, and other potentially affected parties.
- Refine quantification guidelines used by water transfer approving agencies when they are reviewing a proposed water transfer. This will include resolving issues between stakeholders and approving agencies regarding the application of current agency-based quantification criteria.
- Improve the accessibility of state and federal conveyance and storage facilities for the transport of approved water transfers.
- Clearly define carriage water requirements and resolve conflicts over reservoir refill criteria such that transfer proponents are acutely aware of the implications of these requirements.
- Identify appropriate assistance for groundwater protection programs through interaction with CALFED agencies, stakeholders, the legislature and local agencies. This is intended to assist local agencies in the development and implementation of groundwater management programs that will protect groundwater basins in water transfer source areas.
- Establish ~~new~~ accounting, tracking, and monitoring methods to aid instream

flow transfers under California Water Code Section 1707.

Watershed Program

The Watershed Program provides assistance, financial and technical, to local watershed programs that benefit the Bay-Delta system. Watershed actions can improve reliability by shifting the timing of flows, increasing base flows and reducing peak flows. This also helps to maintain levee integrity during high flow periods. Other watershed actions will improve water quality by reducing discharge of parameters of concern.

The Watershed Program includes the following elements:

- Support local watershed activities - Implement watershed restoration, maintenance, and conservation activities that support the goals and objectives of the Program including improved river functions.
- Facilitate coordination and assistance - Facilitate and improve coordination and assistance between government agencies, other organizations, and local watershed groups.
- Develop watershed monitoring and assessment protocols - Facilitate monitoring efforts that are consistent with the CALFED's protocols and support watershed activities that ensure that adaptive management processes can be applied.
- Support education and outreach - Support resource conservation education at the local watershed level, and provide organizational and administrative support to watershed programs.
- Define watershed processes and relationships - Identify the watershed functions and processes that are relevant to the CALFED goals and objectives, and provide examples of watershed activities that could improve these functions and processes.

Storage

Groundwater and /or surface water storage can be used to improve water supply reliability, provide water for the environment at times when it is needed most, provide flows timed to maintain water quality, and protect levees through coordinated operation with existing flood control reservoirs. Decisions to construct groundwater and/or surface water storage will be predicated upon complying with all program linkages, including:

- ~~Completion which includes~~ An assessment of groundwater storage, surface storage, re-operation of power facilities and a fish barrier assessment as part of the Integrated Storage Investigation;
- Demonstrated progress in meeting the Program's water use efficiency, water reclamation and water transfer program targets;
- Implementation of groundwater monitoring and modeling programs; and
- Compliance with all environmental review and permitting requirements.

Subject to the above conditions, new groundwater and/or surface water storage will be developed and constructed, together with aggressive implementation of water conservation,

recycling and a protective water transfer market, as appropriate to meet CALFED Program goals. During Stage 1, CALFED will evaluate and determine the appropriate mix of surface water and groundwater storage, identify acceptable projects and initiate permitting and construction if program linkages and conditions are satisfied.

The total volume of surface and groundwater storage being assessed for this alternative range up to 6.0 million acre feet, and facility locations being considered are located in the Sacramento and San Joaquin Valleys and in the Delta. A list of sites for further consideration is included in the Draft Programmatic EIS/EIR.

Conveyance

The preferred program alternative employs a through-Delta approach to conveyance. Modifications in Delta conveyance will result in improved water supply reliability, protection and improvement of Delta water quality, improvements in ecosystem health, and reduced risk of supply disruption due to catastrophic breaching of Delta levees. The proposed through-Delta conveyance facility actions include:

- construction of a new screened intake at Clifton Court Forebay with protective screening criteria;
- construction of either a new screened diversion at Tracy with protective screening criteria; and/or an expansion of the new diversion at Clifton Court Forebay to meet the Tracy Pumping Plant export capacity;
- implementation of the Joint Point of Diversion for the SWP and CVP, and construction of interties;
- construction of an operable barrier at the head of Old River to improve conditions for salmon migrating up and down the San Joaquin River;
- construction of operable barriers, or their equivalent, taking into account fisheries, water quality and water stage needs in the south Delta;
- operational changes to the SWP operating rules to allow export pumping up to the current physical capacity of the SWP export facilities
- ~~determination of operating criteria for the Delta Cross Channel;~~
- study and evaluate a screened diversion structure on the Sacramento River (or equivalent water quality actions) as a measure to improve drinking water quality in the event that the Water Quality Program measures do not result in adequate improvements toward CALFED's drinking water quality goals. This evaluation would consider how to operate the Delta Cross Channel in conjunction with this new diversion structure to improve drinking water quality, while maintaining fish recovery.
- if the Water Quality Program measures are consistently not achieving drinking water quality goals, and the evaluation demonstrates that a screened diversion of up to 4000 cfs would help achieve those goals without adversely affecting fish populations; a pilot screened diversion would be constructed. This pilot would likely include a fish screen, pumps and a channel between the Sacramento and Mokelumne River. The design, size and operating rules for this pilot facility

would include an analysis of impacts to upstream and downstream migrating fish as well as impacts from habitat shifts resulting from increased flows in the eastern Delta on Delta species. Following evaluation of the pilot facility operations, a final decision would be made on whether the diversion channel and structure should continue to be used, and if so, what the operational rules and optimum size of the diversion should be.

- Construct new setback levees, dredge and/or improve existing levees along the channels of the lower Mokelumne River system from Interstate 5 downstream to the San Joaquin River.

The Preferred Program Alternative also includes a process for determining the conditions under which any additional conveyance facilities and/or other water management actions would be taken in the future. The process would include:

- An evaluation of how water suppliers can best provide a level of public health protection equivalent to Delta source water quality of 50 ppb Bromide and 3 ppm TOC.
- An evaluation based on two independent expert panels' reports—one on CALFED's progress toward these measurable water quality goals and the second on CALFED's progress toward ecosystem restoration objectives, with particular emphasis on fisheries recovery.

B. NEAR-TERM ACTIONS

Implementation of actions begins in Phase III. This period will include site-specific environmental review and permitting as necessary. The first stage of Program implementation is critical to its long-term success because it will serve as an indication of the CALFED agencies and stakeholder community capacity to act on a cost-effective, practical, and equitable set of actions which advance the Program objectives.

The preliminary actions have been grouped into 7 bundles either to provide a balanced suite of actions for specific regions within the CALFED problem and solution areas, or to provide programmatic balance between actions which are not necessarily associated with any specific geographic area. The bundles highlight certain critical ongoing programs which will require implementation decisions in the near future, but do not include the many other ongoing monitoring and improvement programs in the Bay-Delta region.

Lower San Joaquin River and South Delta Region Bundle

This bundle is designed to address the regional concerns regarding south Delta and lower San Joaquin River and south Delta fisheries, water quality, water supply reliability, recreation, flood control, and wildlife habitat. The preliminary actions are designed to conduct feasibility and environmental evaluations and implement corrective actions in the region as well as in upstream watersheds which affect the quality and quantity of flows in the San Joaquin River.

Lower Sacramento River, North Delta Bundle

This bundle is designed to develop a balanced solution to concerns surrounding fishery and water quality impacts of diversions from the Sacramento River into the central Delta, to address regional flood concerns, and to substantially enhance riparian and wetlands habitat corridors in the region.

Yolo Bypass, Suisun Marsh, and West Delta Bundle

This bundle is designed to address water quality, fisheries protection, and habitat enhancement actions for the west Delta region, including Suisun Marsh, the west Delta islands, and the Yolo Bypass. Because of the concern over toxicity effects of mercury originating in the Cache Creek basin, this bundle includes substantial research to identify those sources and potential remediation tools.

Delta-Wide ERP/Levees Bundle

This bundle is designed to achieve a reasonable balance between implementation of ecosystem improvement actions and levee system improvement actions. In addition this bundle includes actions to improve fisheries, water quality, and habitat throughout the Delta, including protection and enhancement of Delta in-channel islands.

Sacramento River, San Joaquin River and Tributaries Bundle

This bundle includes ecosystem restoration primarily fisheries habitat, hatchery management, and floodplain and meander belt restoration along key river reaches.

Integrated Water Management Bundle

This bundle includes actions which can lead to improvements in water supply reliability and flexibility through improvements in water use efficiency, water transfers, water storage and conveyance facilities (groundwater and surface water), water quality, and water associated habitats. The proposed actions include the Program problem area and solution areas, including state and federal project service areas and upper watersheds. It includes key actions that comprise the Integrated Storage Investigation.

Governance Bundle

This bundle addresses certain organizational issues to assure that orderly implementation of Program actions can occur as the level of activity increases substantially. These issues include the potential formation of a CALFED management entity, an ERP implementation entity, comprehensive monitoring, and actions to assure that water quality and water use efficiency measures can be fully implemented. While creation of new entities may be proposed, no agency will transfer any existing regulatory authority to these new entities.

C. IMPLEMENTATION STRATEGY

CALFED is developing an implementation strategy to assure the near (see Section B) and long-term actions are successfully implemented. These assurances include:

- an adaptive management philosophy and process employed throughout the implementation period;
- actions and decisions which are implemented over time to make use of information gained during early implementation;
- coordinated oversight, including comprehensive monitoring, and policy guidance as well as assignment of responsibilities for each of the program's elements;
- a financial plan; and
- an environmental compliance strategy.

Adaptive Management

No long term plan for management of a system as complex as the Bay-Delta can predict exactly how the system will respond to Program efforts or foresee events such as earthquakes, climate change, or the introduction of new species to the system. Adaptive management, as an essential Program concept, acknowledges that there is a need to constantly monitor the system and adapt the actions that are taken to restore ecological health and improve water management. These adaptations will be necessary as conditions change and as more is learned about the system and how it responds. The Program's objectives will remain fixed over time, but the actions may be adjusted to assure that the solution is durable.

Adaptive management utilizes monitoring, assessment and research tools for continuous refinement of Program actions. The information generated from monitoring, assessment, and research will be used to assess the effectiveness of existing actions, to guide additional research and to modify the actions of each of the CALFED programs to improve CALFED's ability to meet its goals and objectives.

Staged Implementation and Decision Making

CALFED has decided to implement the Program through stages and begin with a series of near-term actions (see previous section entitled "Near-term Actions"). Like implementation, the decision process will be staged to allow better decisions at the appropriate time. The preferred program alternative is composed of hundreds of individual actions that will be implemented and refined over the 20 to 30 year implementation period. Therefore, it is logical to implement the Program as well as make decisions in stages according to major program milestones. In this way, adaptive management can be applied equally well to a series of incremental actions such as ecosystem restoration or for major single decision projects such as surface storage or conveyance.

Staged implementation for the CALFED preferred program alternative involves identifying actions for implementation for which there is general agreement and justification, and also developing conditions for future decisions. For some actions, certain predefined conditions would need to be met before actions could proceed. For example, certain conditions would be linked to the decision to construct major facilities. These linked decisions on several program elements may be required at each stage of implementation.

Governance Plan

By the time of the Record of Decision and certification of the final EIS/EIR (ROD/CERT), CALFED will develop and adopt a governance plan for all components of the CALFED program. To the extent agreement on governance is reached before the ROD/CERT, actions will begin PreROD/CERT to implement the governance changes (e.g. federal and state legislation). New legislation is ~~expected to~~ may be required to adopt the long term governance structure. Because legislation could take several years to adopt, an interim governance structure will be adopted by the time of the ROD/CERT to allow for an efficient transition from CALFED planning to implementation. The governance plan will include:

- Governance Structure for Oversight Functions. CALFED will propose an interim and long term governance structure to provide oversight, policy/program guidance and program assessment for the CALFED program.
- Governance Structure for each Program Element. CALFED will propose interim and long term governance structures for each program element to provide program management, coordination, and assessment.
- Authority and Relationships. For the long term governance structures, the governance plan will describe the relationship between the oversight entity and the entities assigned program element management and implementation responsibilities. CALFED will describe and recommend any change in authority or new authority that ~~may be~~ are needed to effectively implement the CALFED program

Finance Plan

By the time of the ROD/CERT, CALFED will develop and adopt a financial plan for all components of the CALFED program. To the extent agreement on a finance plan is reached before the ROD/CERT, actions will be taken PreROD/CERT to implement the plan (e.g. federal and state legislation). The primary components of a finance plan include:

- Program implementation cost estimates. The cost estimate for actions proposed in Stage I will be refined. These proposed actions and the corresponding cost estimates provide the basis for developing the finance strategy.
- Crosscut budget evaluation. An evaluation of related state and federal programs will be conducted and incorporated in the finance strategy and funding requests. This process will identify existing funding and programs that can be used to support proposed CALFED actions.
- Finance strategies and principles. For each CALFED program element a finance strategy will be developed. Key elements of this strategy are the assessment of program benefits and beneficiaries and an equitable, beneficiary-based cost allocation.
- Crediting Policy. CALFED will include a crediting policy in the finance plan. The policy will identify which expenditures and accounts can be credited toward a CALFED program.
- Cost share agreements. The finance plan will include final agreements between state government, federal government, and beneficiaries describing the cost share

requirements that will be agreed to support the CALFED program.


Environmental Compliance

Implementation of the CALFED Program will involve regulatory oversight from a number of federal, state and local government agencies that operate within a complex framework of laws and regulations. To ensure timely implementation of CALFED actions, a coordinated environmental documentation and permitting process is being established. This approach should help facilitate implementation of projects, should benefit public participation and effectively reduce duplication while maintaining important environmental safeguards.

A multi-species conservation strategy (MSCS) (see Multi-Species Conservation Strategy Appendix) will be part of the overall environmental compliance program. The MSCS is a comprehensive species and habitats conservation program that addresses multiple species and habitat needs and the maintenance of ecological functions within the CALFED Program area. The MSCS also evaluates the effects of the Program actions on special status species and NCCP habitats at a programmatic level; includes measures to ensure that Program implementation is consistent with the continued survival and recovery of these species; and provides a framework for site- and action-specific compliance with the Federal and State Endangered Species Acts. Incidental take authority will be granted when a site-specific analysis is concluded consistent with the MSCS.



Memorandum

Date: May 17, 1999
To: CALFED Policy Group
From: Steven R. Ritchie 
Subject: Outcomes from May 13, 1999 Policy Group meeting

The following is a summary of outcomes or actions from the May 13th Policy Group meeting.

Discussion of the Preferred Alternative Description

Policy Group members made some specific word change suggestions.

Page 2 of the May 13 draft: Remove the word "relaxation" and replace with "adjustment of implementation of the standard"(Perciasepe) or something similar. Mike Spear noted that he did not have a problem with the word "relaxation" in this context.

Page 2: Strike the phrase beginning "from water purchases..."

Assistant Interior Secretary Beneke and Resources Secretary Nichols expressed a desire to see more specific quantification of goals for the Water Use Efficiency Program in the description.

Mike Spear concluded by stating that he could not sign off on this description without signing off on the revised Phase II Report.

Patty Beneke raised a question about how bundles and linkages are described and emphasized in the EIS/R.

Tom Hagler responded by stating that these should be described at the programmatic level in the Phase II Report.

CALFED Agencies

California
The Resources Agency
Department of Fish and Game
Department of Water Resources
California Environmental Protection Agency
State Water Resources Control Board

Federal
Environmental Protection Agency
Department of the Interior
Fish and Wildlife Service
Bureau of Reclamation
U.S. Army Corps of Engineers

Department of Agriculture
Natural Resources Conservation Service
Department of Commerce
National Marine Fisheries Service

Steve Ritchie pointed out that linkage development will really happen from draft to final to ROD.

Page 7: Kirk Rodgers requested deletion of the word "new" under the Water Transfers action describing accounting.

Page 10: Gary Stern raised a question regarding the proposed dredging of the lower Mokelumne Rivers absent a Hood diversion.

Action: Steve Ritchie committed to an answer on this next week.

Action: No approval. Lester Snow stated that the first draft of the revised Phase II Report will be out to agencies on May 17th, with comments due back by May 21st. He went on to state that the CALFED staff will work through revision of that draft along with the proposed changes to the preferred alternative description. Patty Beneke stated that she committed to this time frame. No change in print date of June 1st.

Discussion of the "Environmentally Superior Alternative" language (required for CEQA compliance)

Several Policy Group members commented that this piece needed revision.

Action: This document will be revised, along with the Phase II Report and the Preferred Alternative description, over the next two weeks. Tom Hagler committed to working on the re-write.

Discussion of opening Policy Group meetings to the public

Secretary Nichols initiated a discussion making the Policy Group meetings more accessible to the public. Her comments were spurred by the discussion held the prior afternoon at the joint Policy Group-BDAC session. Patty Beneke concurred. Secretary Nichols also stated that she didn't want anything to jeopardize frank discussion among Policy Group members. Tom Hannigan stated that "if this group makes a decision, the public has to be included. If we are only having discussions, then that's something else."

Action: Patty Beneke proposed that the state and federal co-chairs confer with Lester Snow on this issue.

Water Management Strategy

Objective:

Approval of water supply reliability objectives

Approval of approach on the Integrated Storage Investigation

Approval of approach on the Environmental Water Account

Approve package of South Delta actions

Water Supply Reliability Objectives

Mary Nichols commented that these objectives must have numbers associated with them, as well as designation of who is going to pay.

Outcome: No formal action taken, but no objections raised.

Integrated Storage Investigation

Mike Spear pointed out that USFWS had submitted a letter proposing paring down the reservoir site study list further, from fifteen to about eight to ten.

Mark Cowin stated that the economic and environmental screens on the sites had not yet been completed.

Action: Within the next week CALFED staff would reach agreement whether or not to pare the list further. No formal action taken, but no objections raised.

Environmental Water Account

Ron Ott provided a briefing on work to date on the EWA, describing the essential elements of the account necessary to make it function. Two most significant elements:

1. Adequate assets, estimated at \$40-50 million at the beginning of Stage I and \$20-30 million at the end of Stage I
2. The ability to purchase and transfers water at reasonable cost and at necessary times:

Up to 100 TAF of Sacramento River water

Up to 150 TAF of San Joaquin River water

Up to 250 TAF in the export areas

Mike Spear noted that this is water on top of AFRP actions.

Direction from the May 12 Quinn-Spear meeting was to go another month, report to the Policy Group on the negotiating parameters and start gaming 1999-2000.

Outcome: No formal approval, but no objections raised.

South Delta Improvements

Lester Snow presented the CALFED proposal for a South Delta solution, which includes multiple permanent operable barriers, and was based on the last several months of deliberations of the joint federal-state/operations-biological technical team. The overall proposal includes a pilot fish screen at Tracy and water quality actions, which were not discussed on May 13th.

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Mike Spear proposed a middle ground alternative: a three-barrier approach with no Grant Line Canal barrier.

Action: Lester Snow proposed an amended multi-barrier approach: install three permanent barriers, do everything to make this alternative work without the Grant Line Canal barrier, with dredging, extending and screening diversions. NO time frame was set for a decision on a Grant Line Canal barrier. He stated that CALFED staff will write up this proposal, distribute to the three fisheries agencies, USBR, DWR and the COE, through the State and Federal coordinators, Patrick Wright and Alf Brandt.

Conservation Strategy

Objective: Approve draft Conservation Strategy

Ron Rempel briefed the Policy Group on the Strategy.

Outcome: No formal approval, but no significant objections raised.

Battle Creek Project

Kirk Rodgers requested Policy Group approval for a "minor extension" of the time period for securing signatures on the MOU to go forward on the Battle Creek restoration project.

Action: Patty Beneke stated that having heard no objections, extension granted.

Water Acquisitions Plan

Objective: Approve USBR 1999 water acquisitions plan

Kirk Rodgers stated that the USFWS, NMFS and DFG are in the process of drafting a letter to the Ecosystem Roundtable in support of acquiring water this year for fisheries. Kirk noted that such acquisitions would require State Board approval. He stated that the Environmental Assessment would be released on May 14th.

Outcome: No objections raised. Issue of expenditure of Bay Delta Security Act funds still pending.

CMARP

Objective: Accept the CMARP report for inclusion in the EIS/R

Leo Winternitz briefed the Policy Group on the CMARP process and its role in CALFED. Discussion ensued on the completeness of the report, on the need for a CMARP plan. The Policy Group also stated that they wanted to make sure that the CMARP group would not set priorities without Policy Group direction. Leo assured the Group that this would be the case.

Outcome: No formal approval, but no objections raised.

404 Compliance

Objective: Briefing

Rick Soehren stated that the 404 working group was seeking feedback from the Policy Group on the general structure of the draft MOA. Tom Hagler pointed out that this MOA will be a legally binding document. As such, EPA and the COE will play the primary role in drafting the MOA, with input from the other signatory agencies. The Policy Group appeared to understand and accept that approach.

Governance

Objective: Briefing on status of the Governance Plan.

Kate Hansel provided a detailed overview of the proposed interim and long-term proposals for CALFED governance. She committed to having the complete draft to them by May 17th.

Policy Group members discussed the proposals and discussed the role of public input in depth, referring to their deliberations with BDAC on May 12th.

David Cottingham proposed that a small group of state and federal representatives assist Kate with the overall governance plan, convening after the Mantell panel meets in mi-June.

There are general consensus on the need to focus on an implementation structure for the first 7-10 years of the Program, with a proposed legislative packages delivered to the legislature by the ROD.

Kate committed to a proposal for long-term governance by the end of 1999. Se also stated that she would be requesting Policy Group deliberations on the six proposed entities for the Ecosystem Program at their July and August meetings.

Tom Hagler suggested getting stakeholders and state and federal representatives together. Lester raised the question of who would be the appropriate stakeholders.

Action: David Cottingham committed to convening federal and state representatives to assist Kate on conclusion of the Mantell panel.

Kate requested federal and state comments on the draft plan by May 24th.

Finance

Objective: Briefing on draft Finance Plan

Kate Hansel, assisted by Rich Wahl, presented highlights of the draft plan, which was made available at the meeting.

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Mike Spear commented that they needed to make sure to revise the estimated costs (page 64) to reflect the estimated costs of the Environmental Water Account. He went on to state the importance of all agencies making provisions for these costs in their FY 2000-2001 budgets.

Outcome: Kate requested comments on the plan to Rich and her by May 24th.

4. DRAFT PREFERRED PROGRAM ALTERNATIVE

The CALFED Preferred Program Alternative consists of a set of broadly described programmatic actions that set the long-term, overall direction of the CALFED Program. Implementation of these actions will fulfill the CALFED mission to develop a long-term comprehensive plan that will restore ecological health and improve water management for beneficial uses of the Bay-Delta system. Implementation will also meet the Program's objectives for ecosystem quality, water quality, levee and channel system integrity, and water supply reliability.

The description of the alternative is programmatic in nature, intended to help agencies and the public make decisions on the broad methods to meet Program purposes. The alternative is not intended to define the site specific actions that will ultimately be implemented. See Section 4.8 for more specific Stage 1 actions.

4.1 Overview of the Draft Preferred Program Alternative

The most significant aspect of the draft CALFED Preferred Program Alternative is its comprehensive nature. The Program is more than a collection of diverse actions to carry out four objectives. The preferred alternative begins with strategies for solving each of the four Bay-Delta problem areas in an integrated manner. These strategies are interwoven and each must be viewed in the context of the other strategies. For example, to fully implement the Ecosystem Restoration Program (ERP), CALFED must also have a successful strategy to provide the improved water quality that is needed by the ecosystem. The levee strategy provides new opportunities for improving levee-associated habitat for Delta species. Also, water for environmental uses will benefit from improved water supply reliability.

Key Strategies for the Four Problem Areas

Ecosystem Restoration CALFED's ecosystem restoration program (ERP) is the largest, most comprehensive, and most inclusive environmental restoration program in the United States. It provides a new perspective to restoration science by focusing on the rehabilitation, protection or restoration of ecological processes that create and maintain habitats needed by fish, wildlife and plant species dependent on the Delta and its tributary systems. This strategy emphasizes solid science, adaptive management and local participation: an innovative approach that is becoming a model for similar efforts throughout the nation. By restoring the natural processes that create and maintain diverse and vital habitats, CALFED aims to meet the needs of multiple plant and animal species while reducing the amount of human intervention required to maintain habitats.

Adaptive management is an essential program concept, part of each of these strategies. It is necessary to constantly monitor the system and adapt actions that are taken to restore ecological health and improve water management.

Water Quality CALFED's strategy is to provide good water quality for all beneficial uses, and includes reducing or eliminating elements that degrade water quality at its source. In addition, CALFED is committed to continuously improving source water quality that allows municipal water suppliers to deliver safe and affordable drinking water that reliably meets and, where feasible, exceeds applicable drinking water standards. CALFED program actions will be aimed at reducing the levels of problem pollutants such as bromide, organic carbon and pathogens in Delta drinking water sources. CALFED will consider additional water management options as necessary to achieve its goals and objectives, including, but not limited to, provision of alternative sources, use of storage facilities to improve drinking water quality, and an isolated facility to provide source water of better quality.

Levees Delta levees are critical to the physical integrity of the Delta, and the integrity of the state's water system. CALFED will perform risk assessment of all factors that can contribute to levee failure and the consequences of failure to Delta land uses, the ecosystem, water quality and water supply reliability, and implement appropriate risk management considering all available options. Levee improvements will incorporate successful techniques for restoring, enhancing or protecting ecosystem values.

Water Supply Reliability The CALFED Program has proposed a water management strategy to ensure water supply reliability that recognizes the variability of water supply and demand in California. CALFED's water supply reliability goals are to reduce water diversion conflicts between users, decrease drought impacts, increase water supply availability, increase operational flexibility, and increase the utility of water used for all beneficial uses by improving water quality.

Seven general categories of tools are included in the management strategy, all of which are being used in California to some degree: water conservation; water recycling; water transfers, both short-term and long-term; storage, both groundwater and surface water; watershed management; water quality control; and monitoring and real-time diversion management.

A creative new component of this strategy could be an environmental water account. Through the environmental water account, environmental managers could control a package of assets including water and money that provides greater flexibility in helping fish species recover. With an environmental water account, decision-makers could react quickly to the real-time actions of fish, which do not always act according to models and scientific analyses. CALFED is continuing to refine the environmental water account concept and its role in the final plan.

Delta Conveyance In addition to these four strategies, CALFED must consider how various Delta conveyance configurations -- how water is moved through the Delta -- would help

implement the strategies. The Delta conveyance strategy must consider fisheries and water quality for in-Delta uses and drinking water. The existing Delta channels will be an integral part of any CALFED decision for Delta conveyance. The reliance on these channels provides a shared interest in restoring, maintaining, and protecting Delta resources, including water supplies, water quality, levees, channel capacities, natural habitat and the Common Delta Pool.

CALFED's Delta conveyance strategy is to develop a through-Delta conveyance alternative based on the existing Delta configuration with some modifications, evaluate its effectiveness and add additional conveyance and /or other water management actions if necessary to achieve CALFED goals and objectives.

Program Elements

CALFED developed eight program elements to carry out the strategies described above. The draft preferred program alternative is comprised of these program elements, to be implemented in stages over the next 30 years. Each of the elements contributes to improvements in the four problem areas. The program elements include:

- **Long-Term Levee Protection Plan** - Provides significant improvements in the reliability of the Delta levees to benefit all users of Delta water and land.
- **Water Quality Program** - Makes significant reductions in point and non-point pollution for the benefit of all water uses and the Bay-Delta ecosystem.
- **Ecosystem Restoration Program** - Provides significant improvements in habitat, restoration of critical flows, and reduces conflict with other Bay-Delta system resources.
- **Water Use Efficiency Program** - Provides support and incentives at the local level through expanded planning, technical, and financial assistance for efficient use of water for agricultural, urban, and environmental purposes.
- **Water Transfer Program** - Provides a framework of actions, policies and processes to facilitate, encourage, and streamline an active yet protective water market which will allow water to move between users, including environmental uses, on a voluntary and compensated basis.
- **Watershed Program** - Promotes locally-led watershed management activities and protections relevant to achieving the CALFED purpose through financial and technical assistance.
- **Storage** - New storage will be developed and constructed, together with aggressive implementation of water conservation, recycling, and a protective water transfer market, as appropriate to meet CALFED Program goals. During Stage 1, CALFED will evaluate

and determine the appropriate mix of surface water and groundwater storage, identify acceptable projects, and initiate permitting and construction if program linkages and conditions are satisfied.

- **Delta Conveyance** - CALFED will develop a through-Delta conveyance alternative based on the existing Delta configuration with some modifications, evaluate its effectiveness, and add additional conveyance and/or other water management actions if necessary to achieve CALFED goals and objectives. For example, inability to meet CALFED program goals for drinking water quality or fishery recovery using this strategy could lead to a decision to move forward with modifications to this strategy including an isolated facility to carry a portion of export water around the Delta and/or other water management options.

All of these program elements will employ an adaptive management approach with careful monitoring of performance to help modify (adapt) future actions as more is learned about the system and how it responds. The implementation of the preferred program alternative is supported by: an Implementation Plan that describes Stage 1 actions, governance, and financing; and a Comprehensive Monitoring, Assessment and Research Program.

4.2 Staged Implementation and Staged Decision Making

The selection of a programmatic alternative provides the broad resource framework and strategy for implementing a comprehensive program over a period of thirty years or more. The programmatic decision sets in motion the implementation of some actions, as well as additional planning and investigation to refine other actions. Throughout the implementation period, monitoring will provide information about conditions in the Bay-Delta and results of our actions.

The complexity of the Bay-Delta system and the inability to predict future events and how the system will respond to management actions requires that an adaptive management philosophy and process be employed for every program element.

Staged Implementation

- Identify certain actions at the outset (for all stages).
- Identify possible actions for future stages with associated conditions and linkages to guide the decisions. This will allow some decisions when more scientific information will be available and the effects of previous actions will be better known.
- Stage assurances that include specific agreements among agencies and stakeholders

CALFED has decided to implement the Program through stages. The preferred program alternative is composed of hundreds of individual actions that will be implemented and refined over the 20 to 30 year implementation period. Therefore, it is logical to implement the Program in stages according to major program milestones. The challenge in implementing the Program in stages is to allow actions that are ready to be taken immediately to go forward, while assuring that everyone has a stake in the successful completion of each stage.

The individual actions proposed by CALFED cover a spectrum from those that are small, simple, and well understood to those that would involve major modifications to the Bay-Delta system and need additional refinement before implementation can occur. Actions carried out during Stage 1 of implementation -- the first seven years after the Record of Decision -- will generally be smaller or more straightforward actions, including restoration actions for which we have strong scientific understanding and justification. These actions can and should be implemented quickly to achieve early Program benefits. Results will be monitored to determine if the expected results occur. If not, subsequent actions can be modified accordingly.

Larger actions that will be very expensive, will involve some degree of uncertainty, or will make significant or irreversible modification to the system will be implemented later during Stage 1, or in subsequent stages of the implementation period. These actions will need to be carefully planned and structured because they will be less easily modified through adaptive management.

Staged implementation for the CALFED preferred program alternative involves identifying certain actions for implementation for which there is general agreement and justification, and also developing conditions for future decisions and for moving beyond Stage 1. For some actions, certain predefined conditions would need to be met before actions could proceed. For example, certain conditions would be linked to the decision to construct major facilities. These linked decisions on several program elements may be required at each stage of implementation. These require assurances that certain linkages, such as performance measures for each program element, are satisfied before making a decision to proceed.

[actions/studies graphic here]

Like implementation, the decision process will be staged to allow better decisions in adaptive management at the appropriate time. The programmatic nature of the EIS/EIR provides the general direction for long-term implementation but not the specific information necessary for every decision required during the 20-30 year implementation period. Not all decisions need to, or can, be made at the outset of implementation. Therefore, stages will be identified where there are logical implementation milestones and decision making points. In this way, adaptive management can be applied equally well to a series of incremental actions such as ecosystem restoration or for major single decision projects such as surface storage or conveyance.

Discussion is continuing on conditions and linkages for a draft preferred program alternative. There are many potential linkages (many are assurance issues) among the various actions in the

draft preferred alternative, which includes common program elements, storage, and conveyance. Future decisions can be made depending on how the conditions and linkages are satisfied.

There is generally broad agreement on proceeding with the program elements for water quality, water use efficiency, ecosystem restoration, levee system integrity, water transfer framework and the watershed program, but only if implementation is linked to reasonable progress in all program elements. However, there is not agreement on the need for surface storage and dual Delta conveyance (with and isolated facility) to achieve the CALFED goals and objectives.

Meeting the CALFED mission statement and goals is dependent on improvement in all problem areas (ecosystem, water quality, levee system integrity, and water supply reliability). Linkages between improvement in the problem areas are key to consistent and continuous progress towards meeting the CALFED purposes. The eight program elements and linkages between the elements are the mechanisms to achieve improvement in the four problem areas.

4.3 An Integrated Resource Management Strategy

The most significant aspect of the CALFED Preferred Program Alternative is its comprehensive nature. The Program is more than a collection of diverse actions to carry out four objectives. It is founded upon strategies for solving each of the four Bay-Delta problem areas in an integrated manner. These strategies are interwoven and each must be viewed in the context of the other strategies. This integration is also reflected in proposed Program actions. Nearly every action proposed will provide benefits in two or more resource areas at the same time, thus increasing program benefits and minimizing costs. In addition, there is synergy among actions that are geographically or functionally related. This comprehensive and integrated Program is like a braided rope: the intact rope is much stronger than the strands from which it is made.

[rope illustration here]

If the Program as a whole is like a rope, then the four strands in the rope are the resource management strategies that CALFED has developed. These four strategies are the ways that CALFED will restore ecosystem health, provide good water quality, maintain the integrity of the levee and channel system, and improve water supply reliability. These strategies, summarized earlier in this chapter, are described in detail in Section 2.1 of this report, under *Bay-Delta Problems and Objectives*.

These four strategies reflect additional program integration. Each strategy will meet program objectives through implementation of many actions over a period of years. To simplify the discussion of the CALFED programmatic alternative, the actions are grouped under eight program elements: a Long-Term Levee Protection Plan, a Water Quality Program, an Ecosystem Restoration Program, a Water Use Efficiency Program, a Water Transfers Program, a Watershed Program, Storage, and Delta conveyance.

To complete the rope analogy, these eight program elements are like fibers used to make up the four rope strands, which in turn are braided into a complete rope. None of the fibers or strands by themselves are very strong; the strength comes from the way all the pieces are braided together.

The relationship of the four CALFED resource management strategies and the eight program elements is shown in the figure below. Each row represents a resource management strategy, and each column represents one of the eight program elements. The size of the dots represents the relative contribution of actions in a program element toward meeting the objectives of each resource management strategy. This graphic shows the way that as many as eight different kinds of actions may be integrated to make improvements in a single resource area.

[dot graphic goes here]

Program Elements and Resource Management Strategies

Among the eight program elements, there are comprehensive program plans for six. These include ecosystem restoration, water quality, levee and channel integrity, water transfers, water use efficiency, and watershed management. These program plans are included as separate appendices to the *Revised Draft Programmatic Environmental Impact Statement and Report* (EIS/EIR). Among the eight program elements, only storage and conveyance are not described in separate program plans.

Three of these program elements -- ecosystem restoration, water quality, and levees -- correspond to broader resource management strategies. Among the strategies only the CALFED strategy for achieving water supply reliability is not articulated in a program plan.

In order to compensate for limited information on storage and other aspects of water management elsewhere in the CALFED documents, a more complete description of these topics is included here.

4.4 Water Management Strategy

4.5 Integrated Storage Investigation

4.6 Environmental Water Account

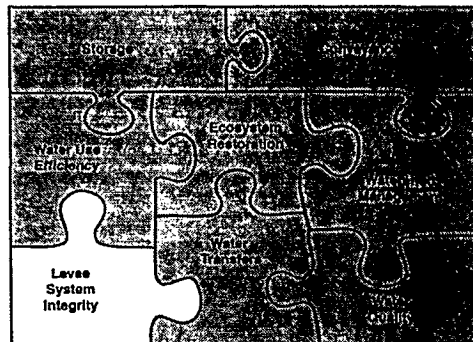
4.7 Program Elements

Meeting the CALFED purpose is dependent on improvement in all four resource areas (ecosystem, water quality, levee system integrity, and water supply reliability). The eight

program elements and linkages between the elements are the mechanisms to achieve improvement in the resource areas.

Long-Term Levee Protection Plan

The Sacramento-San Joaquin Delta is an area of great regional and national importance, which provides a broad array of benefits including agriculture, water supply, transportation, navigation, recreation and fish and wildlife habitat. Delta levees and islands are the most visible man-made features of this system. Levees are an integral part of the Delta landscape and are key to preserving the Delta's physical characteristics and processes including definition of the Delta waterways and islands.



Given the numerous public benefits protected by Delta levees, the focus of the Long-Term Levee Protection Plan is to improve levee integrity. The levee plan will build on the successes of existing programs in achieving its goals. The state has participated in existing levee programs for the past 25 years. However, the federal government has no such authority for non-project levees in the Delta. The Corps' Sacramento-San Joaquin Delta Special Study may be used to establish a federal authority. There are five main parts to the levee plan:

- **Base-Level Protection Plan** - Base-level funding provides equitably distributed funding to participating local agencies in the Delta. One of the primary goals of the CALFED Program is to reconstruct all Delta levees to a particular standard. CALFED has tentatively selected the U.S. Army Corps of Engineers PL 84-99 standard. Base level funding will provide for reconstruction and maintenance of Delta levees to the PL84-99 standard. Required levee work may include removal of vegetation and debris, maintenance of water control devices, repair or replacement of existing bank protection, addition of material to achieve required cross section, removal of flood deposits, extermination of burrowing rodents and crustaceans (mitten crab), repairing and shaping access roads, repairing slipouts and erosion damage, dredging as required for minor repairs, controlling vegetation on the waterside of the levee, and other actions necessary to maintain levee integrity and appurtenances. This component will seek continuity with and build on the successes of the Delta Levee Subventions Program which is currently administered by DWR.

--REVISED AFTERNOON AGENDA--
CALFED Policy Group
May 13, 1999

- 1-1:45** **Water Management Strategy (cont'd.)**
 South Delta Improvements (Action)--Lester Snow
- 1:45-2:15** **1999 water acquisitions plan(Action)--Kirk Rodgers**
 Accept proposal
 1999 Ops Plan (Information)--Kirk Rodgers
- 2:15-2:45** **Conservation Strategy (Information and Action)--Marti Kie, Ron Rempel**
 Briefing on the Conservation Strategy including its relation to the
 Ecosystem Restoration Program
 Approval of draft Conservation Strategy
- 2:45-3:00** **Comprehensive Monitoring and Research Program--Leo Winternitz**
 Accept CMARP Report
- 3-3:20** **404 Compliance (Information and Action)--Rick Soehren**
 Briefing on status of draft MOA
 Approve direction of strategy
- 3:20-4:00** **Governance (Information)--Kate Hansel**
 Discussion of revised plan for interim and long-term governance
 and schedule for final review and comment
- 4-4:45** **Finance (Information)--Kate Hansel**
 Discussion of revised plan for finance and schedule for final review and comment
- 4:45-5** **Water Management Strategy(cont'd.)**
 Preliminary findings from the Economic Analysis of
 Water Management Alternatives (Information)--Mark Cowin
- 5-5:15** **Wrap-up**
- 5:15** **Adjourn**
- 5:00** **Adjourn**